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**Africa RISING Builds Capacity for Integrate Crop-Livestock Systems Research**

The International Institute of Tropical Agriculture (IITA)-led Africa RISING in West Africa funded a short-course on *‘Integrated Crop-Livestock Systems Research’* for early-career scientists in Ghana. The course was run by Dr. Asamoah Larbi, the Chief Scientist for the Africa RISING project in West Africa and Representative of IITA Ghana, from 21-25 July, 2014 at the Estee Crystal Hotel, Bolgatanga in the Upper East Region of Ghana.

The aim of the course was to strengthen the capacity of in the National Agricultural Research and Extension Systems (NARES) for integrated systems research to sustainably intensify the smallholder mixed crop-livestock farming systems in West Africa. The consisted of lectures on: principles of crop-livestock integration; a review of past research on integrated crop-livestock systems research in West Africa; key mixed crop-livestock farming systems in West Africa and opportunities for sustainable intensification; and hands-on-training on the design of integrated crop-livestock experiments.

It was attended by 14 early-career scientists from the following institutions: Ministry of Food and Agriculture (MoFA), Savanna Agricultural Research Institute (SARI), Animal Research Institute (ARI), Kwame Nkrumah University of Science and Technology (KNUST), University for Development Studies (UDS), Biotechnology and Nuclear Agricultural Research Institute (BNARI) and Plant Genetics Resources Institute (PGRI) and Africa RISING research assistants.

The Acting Director of Agriculture for the Upper East Region and District Director of Agriculture for Bongo, Alhaji Musbawo; and Mr. Adamo Seidu Vasco, District Director of Agriculture for Kassena-Nankana gave the opening addresses. In his opening address, Mr. Musbawo noted that the Upper East Region is the poorest in the country with scarce natural resources for agricultural development. Therefore, integration of the scarce natural resources is the only way to improve agricultural production and alleviate poverty in the region. He encouraged the young scientist to take the training seriously to enable them design good integrated systems research interventions at the end of the training. He thanked Africa RISING for holding such a training workshop in the region because it is in line with the new strategy of the Ministry of Food and Agriculture to sustainably intensify and improve agricultural production in the region.

Dr. Asamoah Larbi thanked directors of agriculture for the effective partnership with IITA in the implementation of the Africa RISING project in the region. The participants were grateful to Africa RISING project for the exposure to integrated systems research and pledged to use the knowledge and skills acquired in their professional careers. They pleaded to Africa RISING to repeat the course to more earlier-career scientists to expose them to integrated systems research because such courses are not taught in the universities.



*Photo: Participants of the integrated crop-livestock systems short-course with Alhaji Musbawo (5th from right) the Acting Director of Agriculture, Upper East Region, and Dr. Asamoah Larbi (6th from right), Chief Scientist, Africa RISING West Africa and IITA Representative in Ghana and sole resource person for the course*.

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*List of Participants*

Africa RISING Ghana – Integrated Crop-Livestock Short Course

Estee Hotel Bolga, Upper East Region, Ghana

21-25 July, 2014

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No |  | **Mobile No.** | **Agency** | **Location** |
|  | **Participants** |  |  |  |
| 1 | Evelyn Otoo | 0249534074 | CSIR-Biotechnology and Nuclear Agriculture Research Institution | Accra |
| 2 | Henry Algma | 0207831076 | University for Development Studies | Tamale |
| 3 | Nikki Bediako | 0244233895 | CSIR-Animal Research Institute | Accra |
| 4 | Sophia Ackon | 0246002542 | CSIR-Biodiversity Research Insitute | Bunso |
| 5 | Samuel Oteng | 0202398560 | Ministry of Food and Agriculture | Wa |
| 6 | Bright Amponsah | 0244027364 | Kwame Nkrumah University of Science and Technology | Kumasi |
| 7 | Salim Lamini | 0208273936 | CSIR-Savanna Agricultural Research Institute | Manga |
| 8 | Hamid Seidu | 0205367753 | International Institute of Tropical Agriculture | Wa |
| 9 | Ebenezer Nartey | 0244407459 | International Institute of Tropical Agriculture | Tamale |
| 10 | Shaibu Mellon | 0244130114 | International Institute of Tropical Agriculture | Tamale |
| 11 | Brain Akakpo | 0244129380 | International Institute of Tropical Agriculture | Tamale |
| 12 | Abdul Nurudeen | 0262955123 | Kwame Nkrumah University of Science and Technology | Kumasi |
| 13 | Raphael Ayizanga | 0262648636 | Kwame Nkrumah University of Science and Technology | Kumasi |
| 14 | Dominic Sobre | 0243980184 | International Institute of Tropical Agriculture | Navrongo |
|  | **Resource persons** |  |  |  |
| 15 | Asamoah Larbi | 0543555904 | International Institute of Tropical Agriculture | Tamale |

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*Program*

Africa RISING Ghana – Integrated Crop-Livestock Short Course

Estee Hotel Bolga, Upper East Region, Ghana

21-25 July, 2014

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirements:** | | | |
| **1. Participant’s background:** Each participant is required to come with a 3-slide PowerPoint presentation – education (1 slide), work experience (1 slide) and research interest (1 slide) for a 5-minute presentation | | | |
| **2. Design of an integrated crop-livestock experiment:** Each participant will design an experiment and make a 10-minute presentation on – title, treatments, design and replication, field layout, duration and data to be collected. | | | |
| Day | Time | Activity | Responsibility |
| Sunday  20 July | 1200-1730 | **Following participants arrive at Tamale and check-in Modern City Hotel:** Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi) , Hamid Seidu (Wa), Joel Sam (Accra), M. Karbo (Accra) | Obeng-Fosu & Portia |
|  |  |  |  |
| Monday  21 July | 0830-0900 | **Following participants arrive at IITA Office at Tamale and wait in the Conference room** : Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi); Juliana Bawah (Tamale), Kelvin Tengan (Tamale), Henry Algma (Tamale), Ebenezer Nartey (Tamale), Brain Akakpo, Shaibu Mellon (Tamale) | Obeng-Fosu & Portia |
|  |  |  |  |
|  | 0930-1230 | **Following participants depart from IITA Office at Tamale to Bolga, and check in Estee Hotel in Bolga**: Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi); Juliana Bawah (Tamale), Kelvin Tengan (Tamale), Henry Algma (Tamale), Ebenezer Nartey (Tamale), Brain Akakpo, Shaibu Mellon (Tamale) | Obeng-Fosu & Portia |
|  |  |  |  |
|  | 1200-1300 | **Following participant arrive at Bolga and check-in Estee Hotel, Bolga** : Salim Lamini (Manga) | Obeng-Fosu & Portia |
|  |  | **Non-resident participants** : Nurudeen Abdul Rhaman, Dominic Sobre, Raphael Ayizanga, Desire Dickson (Navorongo) |  |
|  |  |  |  |
|  | 1300-1430 | Lunch at Estee Hotel | Obeng-Fosu Brempong |
|  |  |  |  |
|  | 1500-1600 | Payments, re-imbursement and related matters | Obeng-Fosu & Portia |
|  |  |  |  |
|  | 1600-1800 | Each participant prepares a 3-slide PowerPoint presentation on education, work experience and research interest and submit to Shaibu Mellon | Participants & Shaibu Mellon |
|  |  |  |  |
|  | 1800-2000 | Dinner to be ordered by participants from hotel | Participants |
|  |  |  |  |
| Tuesday  22 July | 0700-0800 | Breakfast |  |
|  | 0800-0900 | Registration, payments and re-imbursement continued | Obeng-Fosu & Portia |
|  |  |  |  |
|  | 0900-1000 | Opening Addresses |  |
|  |  | ▪District Director of Agriculture – Bongo District | Alhaji Musbaw |
|  |  | ▪District Director of Agriculture – Kassena Nankana | Adamu Vasco |
|  |  | ▪Chief Scientist (Africa RISING West Africa) & Country Representative (IITA) | Asamoah Larbi |
|  |  | ▪Regional Director of Agriculture – Upper East | Alhaji Musbaw |
|  |  |  |  |
|  | 1000-1030 | Group photo and coffee break |  |
|  |  |  |  |
|  | 1030-1230 | PowerPoint presentation on education, work experience and research |  |
|  |  |  | Evelyn Otoo |
|  |  |  | Nikki Bediako |
|  |  |  | Sophia Ackon |
|  |  |  | Samuel Oteng |
|  |  |  | Bright Amponsah |
|  |  |  | Hamid Seidu |
|  |  |  | Juliana Bawah |
|  |  |  | Kelvin Tengan |
|  |  |  | Henry Algma |
|  |  |  | Ebenezer Nartey |
|  |  |  |  |
|  | 1230-1400 | Lunch |  |
|  |  |  |  |
|  | 1400-1700 | PowerPoint presentation on education, employment, research |  |
|  |  |  | Brain Akakpo |
|  |  |  | Shaibu Mellon |
|  |  |  | Salim Lamini |
|  |  |  | Nurudeen RA |
|  |  |  | Dominic Sobre |
|  |  |  | Raphael Ayizanga |
|  |  |  |  |
|  | 1830-2030 | Workshop Dinner | Obeng-Fosu & Portia |
|  |  |  |  |
| Wednesday  23 July | 0700-0800 | Breakfast |  |
|  |  |  |  |
|  | 0830-0930 | Principle of crop-livestock integration | Asamoah Larbi |
|  |  |  |  |
|  | 0930-1030 | Principle of crop-livestock integration | Asamoah Larbi |
|  |  |  |  |
|  | 1030-1100 | Coffee break |  |
|  |  |  |  |
|  | 1100-1200 | Integrated crop-livestock systems | Asamoah Larbi |
|  |  |  |  |
|  | 1200-1300 | Integrated crop-livestock systems | Asamoah Larbi |
|  |  |  |  |
|  | 1300-1400 | Lunch |  |
|  |  |  |  |
|  | 1400-1600 | Integrated crop-livestock research experiments | Asamoah Larbi |
|  |  |  |  |
|  | 1600-1700 | Integrated crop-livestock research experiments | Asamoah Larbi |
|  |  |  |  |
|  | 1800-2000 | Dinner to be ordered by participants from hotel |  |
|  |  |  |  |
| Thursday  24 July | 0700-0800 | Breakfast |  |
|  |  |  |  |
|  | 0830-0930 | Design of integrated crop-livestock research | Asamoah Larbi |
|  |  |  |  |
|  | 0930-1030 | Design of integrated crop-livestock research | Asamoah Larbi |
|  |  |  |  |
|  | 1030-1100 | Coffee break |  |
|  |  |  |  |
|  | 1100-1200 | Integrated crop-livestock systems | Asamoah Larbi |
|  |  |  |  |
|  | 1200-1300 | Integrated crop-livestock systems | Asamoah Larbi |
|  |  |  |  |
|  | 1300-1400 | Lunch |  |
|  |  |  |  |
|  | 1400-1530 | Hands-on training on design of integrated crop-livestock experiments | Participants |
|  |  | Each participant design and present an integrated crop-livestock experiment - title, treatments, design and replicates, field layout, duration and measurements/observation. |  |
|  |  | **Group 1: Design of crop-sheep/goat experiment**: Dominic Sobre, Nikki Bediako , Samuel Oteng, Bright Amponsah, Shaibu Mellon. |  |
|  |  | **Group 2: Design of crop-poultry experiment:** Nurudeen Abdul Rhaman, Evelyn Otoo, Ebenezer Nartey, Brain Akakpo |  |
|  |  | **Group 3: Design of crop-pig experiment:** Salim Lamini, Raphael Ayizanga, Desire Dickson, Sophia Ackon, Henry Algma |  |
|  |  |  |  |
|  | 1530-1600 | Coffee break |  |
|  |  |  |  |
|  | 1600-1700 | Hands-on training on design of integrated crop-livestock experiments |  |
|  |  | Each participant design and present an integrated crop-livestock experiment - title, treatments, design and replicates, field layout, duration and measurements/observation. |  |
|  |  | **Group 1: Design of crop-sheep/goat experiment**: Dominic Sobre, Nikki Bediako , Samuel Oteng, Bright Amponsah, Shaibu Mellon. |  |
|  |  | **Group 2: Design of crop-poultry experiment:** Nurudeen Abdul Rhaman, Evelyn Otoo, Ebenezer Nartey, Brain Akakpo |  |
|  |  | **Group 3: Design of crop-pig experiment:** Salim Lamini, Raphael Ayizanga, Desire Dickson, Sophia Ackon, Henry Algma |  |
|  |  |  |  |
|  | 1800-2000 | Dinner to be ordered by participants from hotel |  |
|  |  |  |  |
| Friday  25 July | 0700-0800 | Breakfast check-out |  |
|  |  |  |  |
|  | 0800-1000 | Presentation of experiments by participants (10 mins per participant) |  |
|  |  |  | Evelyn Otoo |
|  |  |  | Nikki Bediako |
|  |  |  | Sophia Ackon |
|  |  |  | Samuel Oteng |
|  |  |  | Bright Amponsah |
|  |  |  | Hamid Seidu |
|  |  |  | Juliana Bawah |
|  |  |  | Henry Algma |
|  |  |  | Ebenezer Nartey |
|  |  |  |  |
|  | 1000-1030 | Coffee break |  |
|  |  |  |  |
|  | 1030-1130 |  | Brain Akakpo |
|  |  |  | Shaibu Mellon |
|  |  |  | Salim Lamini |
|  |  |  | Nurudeen RA |
|  |  |  | Dominic Sobre |
|  |  |  | Raphael Ayizanga |
|  |  |  |  |
|  | 1130-1200 | General discussion and closing remarks | Asamoah Larbi |
|  |  |  |  |
|  | 1200-1300 | Lunch |  |
|  |  |  |  |
|  | 1300-1630 | Participants depart from Estee Hotel Bolga to Tamale: Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi); Henry Algma (Tamale), Ebenezer Nartey (Tamale), Brain Akakpo, Shaibu Mellon (Tamale) | Obeng-Fosu & Portia |
|  |  |  |  |
|  |  | Participants check-in Modern City Hotel: Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi) , Hamid Seidu (Wa) and Joel Sam (Accra) | Obeng-Fosu & Portia |
|  |  |  |  |
|  | 1300-1630 | Following participants depart from Estee Hotel, Bolga to Manga (Salim Lamini) and Navorngo (Nurudeen Abdul Rhaman, Dominic Sobre, Raphael Ayizanga, Desire Dickson) | Dominic |
|  |  |  |  |
| Saturday  26 July | 0700-0800 | Participants check out of Modern City Hotel to base: Evelyn Otoo (Accra), Nikki Bediako (Accra), Sophia Ackon (Bunso), Samuel Oteng (Wa), Bright Amponsah (Kumasi) , Hamid Seidu (Wa), and Joel Sam (Accra) | Obeng-Fosu & Portia |